SUBJECT INDEX

Aberdeen Proving Ground Computers 43, 96 Accounting 167-168 ACE 96, 174, 175 Actuarial Tables 187, 212, 216-217, 228 Addition and Subtraction Logs 202 Aerodynamics see Fluid Mechanics Air Navigation see Navigation Antilogarithms 195-196 Arc Cosine 199-200 Arc Cotangent 199 Arc Sine 199-200 Arc Tangent 9-11, 199-200 Arc Tangent Relations 9-10 Area of Circles 199 ASCC 169, 224, 228 Astronomy 187, 190-191, 211, 230-231 Astrophysics 23

Ballistics 190
BARK 29-34, 40, 155
Bell Telephone Computers 30, 45, 171
Bernoulli Polynomials 15, 195
Bessel Functions 24-25, 38, 76, 80-81, 112, 151-152, 158-159, 163, 189, 204-207, 222-224, 226-227
Bessel Functions, Roots of 24-25, 80
Bessel-Clifford Functions 206

Automatic Computing Engine 96, 174-175

Automatic Sequence Controlled Calculator

169, 224, 228

Binār Automatisk Relä-Kalkylator 29-34, 40, 155

Binomial Coefficients 195 Binomial Distribution 22 Biography and Bibliography 108–109, 255– 259

BTL 30, 45, 171 Burroughs Laboratory Computer 241

Calculating Machines see Computing Machines
CALDIC 57-61, 120-128, 173
California Digital Computer 57-61, 120-128, 173

173 Census 245 Chaplygin Functions 158 Chi Square Distribution 110, 150

Coding 31-32, 40-41, 86-92, 120-128, 232-237

Computing Machines, Analogue 49-53, 96, 99-108, 173, 176-183, 246-255

Computing Machines, Digital 1, 5, 20, 29-34, 40-48, 86-92, 95-108, 167-177, 185, 224, 228, 233-237, 240-245, 254 Computing Methods see Numerical Analysis Congruences 12, 28, 81, 85, 191, 210 Conversion Equipment 240-241 Conversion Tables 212 Cosecant 197-198 Cosine 5, 20-21, 191, 196-198, 209 Cosine, Hyperbolic 201 Cosine Integral 156, 202, 222 Cotangent 196-198 Coulomb Potential 224-225 CPC 86-92, 185, 254 CRC 101 241 Cube Root 194 Cubes 189, 191-192 Cubic Fields 134

Decimal Equivalents of Fractions 135–139
Derivatives 16, 213–215
Difference Equations 33–39, 163–167
Differences 62–66
Differences of Zero 70, 73
Differential Analyzers 104–106, 250–253
Differential Equation Solvers 102, 104–106, 179
Differential Equations 33–39, 92–95, 128–133, 155, 158, 169, 207–208, 224–225
Differentiating Machines 99–102, 106
Diophantine Equations 138–139, 162, 191, 211

I

I

I

Distribution Functions 2, 6-8, 17, 221-222 Divisors, Sums of Fifth Powers of 28, 54, 190, 210

EDSAC 25, 43-45, 97, 170-171, 207 EDVAC 1, 41-43, 241 Elasticity 154

Electronic Delay Storage Automatic Calculator 25, 43-45, 97, 170-171, 207 Electronic Discrete Variable Computer 1,

41-43, 241
Electronic Numerical Integrator and Com-

puter 1, 5, 20, 40, 96, 98, 170–171, 195, 208, 210, 226, 241, 243 Elliptic Functions 157–158

Elliptic Integrals 78–80, 157, 223

Engineering Research Associates Computer 241

ENIAC 1, 5, 20, 40, 84, 96, 98, 170-171, 195, 208, 210, 226, 241, 243

SUBJECT INDEX

Aberdeen Proving Ground Computers 43, 96 Accounting 167-168 ACE 96, 174, 175 Actuarial Tables 187, 212, 216-217, 228 Addition and Subtraction Logs 202 Aerodynamics see Fluid Mechanics Air Navigation see Navigation Antilogarithms 195-196 Arc Cosine 199-200 Arc Cotangent 199 Arc Sine 199-200 Arc Tangent 9-11, 199-200 Arc Tangent Relations 9-10 Area of Circles 199 ASCC 169, 224, 228 Astronomy 187, 190-191, 211, 230-231 Astrophysics 23

Ballistics 190
BARK 29-34, 40, 155
Bell Telephone Computers 30, 45, 171
Bernoulli Polynomials 15, 195
Bessel Functions 24-25, 38, 76, 80-81, 112, 151-152, 158-159, 163, 189, 204-207, 222-224, 226-227
Bessel Functions, Roots of 24-25, 80
Bessel-Clifford Functions 206

Automatic Computing Engine 96, 174-175

Automatic Sequence Controlled Calculator

169, 224, 228

Binār Automatisk Relä-Kalkylator 29-34, 40, 155

Binomial Coefficients 195 Binomial Distribution 22 Biography and Bibliography 108–109, 255– 259

BTL 30, 45, 171 Burroughs Laboratory Computer 241

Calculating Machines see Computing Machines
CALDIC 57-61, 120-128, 173
California Digital Computer 57-61, 120-128, 173

173 Census 245 Chaplygin Functions 158 Chi Square Distribution 110, 150

Coding 31-32, 40-41, 86-92, 120-128, 232-237

Computing Machines, Analogue 49-53, 96, 99-108, 173, 176-183, 246-255

Computing Machines, Digital 1, 5, 20, 29-34, 40-48, 86-92, 95-108, 167-177, 185, 224, 228, 233-237, 240-245, 254 Computing Methods see Numerical Analysis Congruences 12, 28, 81, 85, 191, 210 Conversion Equipment 240-241 Conversion Tables 212 Cosecant 197-198 Cosine 5, 20-21, 191, 196-198, 209 Cosine, Hyperbolic 201 Cosine Integral 156, 202, 222 Cotangent 196-198 Coulomb Potential 224-225 CPC 86-92, 185, 254 CRC 101 241 Cube Root 194 Cubes 189, 191-192 Cubic Fields 134

Decimal Equivalents of Fractions 135–139
Derivatives 16, 213–215
Difference Equations 33–39, 163–167
Differences 62–66
Differences of Zero 70, 73
Differential Analyzers 104–106, 250–253
Differential Equation Solvers 102, 104–106, 179
Differential Equations 33–39, 92–95, 128–133, 155, 158, 169, 207–208, 224–225
Differentiating Machines 99–102, 106
Diophantine Equations 138–139, 162, 191, 211

I

I

I

Distribution Functions 2, 6-8, 17, 221-222 Divisors, Sums of Fifth Powers of 28, 54, 190, 210

EDSAC 25, 43-45, 97, 170-171, 207 EDVAC 1, 41-43, 241 Elasticity 154

Electronic Delay Storage Automatic Calculator 25, 43-45, 97, 170-171, 207 Electronic Discrete Variable Computer 1,

41-43, 241
Electronic Numerical Integrator and Com-

puter 1, 5, 20, 40, 96, 98, 170–171, 195, 208, 210, 226, 241, 243 Elliptic Functions 157–158

Elliptic Integrals 78–80, 157, 223

Engineering Research Associates Computer 241

ENIAC 1, 5, 20, 40, 84, 96, 98, 170-171, 195, 208, 210, 226, 241, 243

Epstein Zeta Function 77-78 Equation Solvers 49, 102, 104-106, 246-248 Equations, Transcendental see Transcendental Equations

ERA 1101 241

sis

0

06.

28-

91.

22

54,

Cal-

1,

om-

195.

uter

171,

Errata 25, 27, 74, 81-83, 139, 143, 146-147, 151-153, 160-161, 228-231

Error Functions see Probability Integral Error Functions of a Complex Variable 67-70

Euclid's Algorithm 133

Exponential Function 7, 27, 70, 190-191, 200 Exponential Integral 55, 156, 162-167, 184,

Exponential Integral, Complex Argument 202-203

Factor Tables 231 Factorial Designs 17-19 Factorials 82, 162, 195 Factorizations 28, 72, 82, 133-134, 160, 162 Fairchild Linear Equation Solver 45 Farey Series 135-139 Fermat's Converse 12, 85 Fermat's Quotient 84-85, 210 Fermi-Dirac Functions 160 Ferranti Computer 96 Fibonacci Numbers 72 Fields, Cubic see Cubic Fields Fields, Quadratic see Quadratic Fields Figurate Numbers 15 Finite Differences 15 Fluid Mechanics 11-12, 77, 187, 189, 210,

Fourier Coefficients 141, 190 Fourier Series 15

Fresnel Integral 156 Functions (special) see Bessel, Bessel-Clifford, Chaplygin, Distribution, Elliptic, Epstein Zeta, Error, Exponential, Fermi-Dirac, Gamma, Hankel, Hyperbolic, Hypergeometric, Jacobi Elliptic, Laguerre, Legendre, Liouville, Lommel, Mathieu, Probability, Ramanujan, Riemann Zeta, Struve, Trigonometric, Weierstrass Elliptic

Gamma Function 203 Gamma Function, Complex Argument 25-26 Gamma Function, Incomplete 156, 221 Gamma Function, Log of 203 Gamma Function, Reciprocal of 160-161 Gear Ratios 138

General Electric Computers 95 Geodetic Tables 26-27, 187, 198, 212 Graphs 49

Hankel Functions 38 Harmonic Analysis 19-21, 149, 208-209 Harmonic Synthesis 19-21 Harvard Mark I 169, 224, 228 Harvard Mark II 97, 172 Harvard Mark III 46, 97 Harvard Mark IV 97 Haversines 258-259 Hermite Polynomials 82-83, 203-204 High Speed Sampling Machine 1 Hydraulics 33, 79 Hyperbolic Functions 27, 189, 201-202 Hyperbolic Functions, Inverse 17, 201-202 Hypergeometric Functions, 153 Hypergeometric Functions, Confluent 76

Institute for Advanced Study Computer 1, 43, 96, 241 **Integral Equations 23** Integrals, Definite 159, 222-223, 225, 232 Integrals (special) see Cosine, Elliptic, Exponential, Fresnel, Probability, Sine Integraphs 106-107, 180 Integrators 106-108 International Business Machines 86-92, 95-96, 98, 115-120, 197, 201, 254 Interpolation 16, 140-141, 213-215, 218-219 Interpolation Coefficients 24, 140-141, 208

Institut Blaise Pascal Machine 97

Jacobi Elliptic Function 155, 157-158

Isograph 104

Iteration 183

Kalin-Burkhart Logical-Truth Calculator 120 Kepler's Equation 189, 211

Lagrangean Coefficients 208 Laguerre Functions 232 Latin Rectangles 13 Latin Squares 17-19 Legendre Functions 152-153 Linear Equation Solvers 45, 178 Linear Programming 244-245 Linkages 49 Liouville Function 71-72 Logarithms, Common 195-196 Logarithms, Natural 6, 83-84, 189, 201 Logarithms of Complex Numbers 202

Logarithms of Trigonometric Functions 191 Logic Computers 120-128, 242-243 Lommel Function 154

MADDIDA 43, 172, 241
Magnetic Drum 95
Magnetic Drum Digital Differential Analyser (MADDIDA) 43, 172, 241
Manchester University Digital Computer 96
Mathieu Functions 190, 207
Matrices 13-14, 34, 55, 115-120, 180, 237-239, 255
Mechanisms 48-49, 99-102, 106-107
Memory Devices 39, 43-44, 46
Monte Carlo Method 55, 109, 115-120
Moore School Automatic Computer 96, 241
MSAC 96, 241
Multiplying Sticks 253-254

NAREC 96, 242
National Bureau of Standards Eastern Automatic Computer 1, 40, 43-45, 81, 96-97, 99, 172, 232-237, 241
National Bureau of Standards Western Automatic Computer 1, 43, 46, 82, 96-97, 173, 241
Naval Proving Ground Calculator 96
Naval Research Laboratory Electronic Digital Computer 96, 242
Navigation 211-212
Nomograms 51-53, 102
Number Theory 12, 28, 70-72, 84-85, 133-139, 162, 187, 190-191, 210-211, 215-

OMIBAC 95 ORDVAC 241 Orthogonal Polynomials 81, 142–143, 190, 208

Numerical Integration 61-67, 216-219, 222

Numerical Analysis 34-39, 92-95, 163-169,

216, 231-232

237-240

Permutations 13, 15, 17-19, 71
Physical Tables 190
Poisson Distribution 3, 146
Polynomials see Bernoulli, Hermite, Orthogonal
Powers 191-192
Powers, Fractional 191, 194
Powers of Complex Numbers 191, 194-195
Powers of 2 192, 210
Prime Pairs 215-216
Primes, Large 55

Primes, Lists of 28, 210
Primes, Powers of 210
Probability Functions 203, 221
Probability Integral 203-204, 221, 228-230
Probability Integral, Complex Argument 204
Punch Card Methods 59-60, 115-120
Punch Card Tables 185-212
Pythagorean Triangles 28, 232

Str

Su

Su

SV

Ta

Ta

TH

Tr

At

Al

Ai

Al

Al

Al

Al

Al

Al

Ar

Ar

Ar

Ar

Ar

Ar

A

Ar

Ar

Ar

At

Ar

Ar

As

As

At

A

B

Ba

Ba

Ba

Ba

Ba

Ba

Ba

Quadratic Fields 133, 139 Quadratic Partitions 85, 162 Quality Control 149-150

Radiation 226 Radioactivity 3 Ramanujan's Function 53, 190, 210 Random Digits 2-4, 109-110, 115, 209 Random Numbers 3-8, 118, 187, 209-210 Rational Triangles 12 Raytheon Computer 43, 172, 241 REAC 175-176, 250-253 Reciprocals 189, 191-193 Recurring Series 19, 72 Reeves Electronic Analogue Computer 175-176, 250-253 Registers 41 Relaxation Methods 255-258 Relay Computers 30, 45, 96, 169, 171, 197, 201, 224, 228, 241 Riemann Zeta Function 207 Runge-Kutta Method 128-133

Sampling 1-8 SEAC 1, 40, 43-45, 81, 96-97, 99, 172, 232-237, 241 Selective Sequence Electronic Computer 1, 5, 40 Secant 197-198, 211 Series 11-12, 219-221, 225 SIMON 95 Sine 20-21, 191, 196-198, 209 Sine, Hyperbolic 201-202 Sine Integral 156, 202 Slide Rule 102 Spherical Triangles 200, 211 Spheroidal Wave Functions 76, 79 Square Root 111-112, 180-182, 189, 191, 193-194 Squares 189, 191 SSEC 1, 5, 40 Statistics 17-22, 72-75, 85-86, 141-150, 190, 203-204, 221-222 Struve Function 22-25

Student's t 75, 85-86 Sum of Fifth Powers of Divisors 28, 54, 190, 210 Sum of Two Squares 12 SWAC 1, 43, 46, 82, 96-97, 173, 241

Tangent 9, 20, 196-198, 211
Tangent, Inverse see Arc Tangent
Transcendental Equations 140, 231
TRE Computer 96
Trigonometric Coefficients 207

nt

ter

97,

72,

iter

191,

150,

Trigonometric Functions 9-11, 70, 189-191, 196-199

UNIVAC 1, 172, 176-177, 241, 245 Universal Automatic Computer 1, 172, 176-177, 241, 245

Weierstrass Elliptic Functions 28, 157 Whirlwind 43, 96, 241 Wilson's Quotient 81

Zuse's Machine 45-46, 241

NAME INDEX

Abbott, W. R. 128 Abramowitz, M. 22, 25, 186 Aiken, H. H. 43, 97, 171, 186, 243 Airey, J. R. 67, 69, 164, 167, 223 Akademiia Nauk, SSSR 151, 160 Akushskii, I. Ia. 25, 27 Alden, J. M. 170 Aldis, W. S. 151 Alexander, S. N. 96, 98, 245 Alt, F. L. 171, 243, 245 Anderson, R. L. 81, 141, 143, 190 Anderson, T. W. 141 Andoyer, H. 189 Andrew, M. M. 39, 95, 170, 171 Andrews, E. G. 171 Andrews, H. L. 102 Anema, A. S. 28, 232 Anscombe, F. J. 17 Apostol, T. M. 78 Archibald, R. C. 24, 25, 81, 109, 112, 138, 140, 152, 222, 224, 259 Armer, P. 47, 186 Arnold, K. J. 143 Aroian, L. A., 146, 148 Ashby, W. R. 97 Astrand, J. J. 189 Atkinson, C. P. 100, 102 Avery, H. T. 248

BAASMTC, 25, 74, 75, 151, 152, 166 Babbage, C. 169 Babington-Smith, B. 109, 110 Banachiewicz, T. 13, 112 Baños, A. Jr. 173 Barankin, E. W. 244 Barker, R. H. 240 Barlow, P. 109, 189 Barnett, M. P. 222 Bartberger, C. L. 222 Bartlett, M. S. 145, 146 Bauer, L. 175, 250 Baum, R. V. 174 Bauschinger, J. 191 Bayly, J. G. 102 Beard, R. E. 70, 216 Beck, C. 176, 250, 253 Becker, G. F. 27 Becker, H. W. 13 Beckerley, J. G. 26 Bedford, F. G. D. 259 Beeger, N.G.W.H. 12, 81, 84, 85, 160 Beggs, J. S. 248 Beiser, A. 102 Bell, W. D. 186, 188, 196, 254 Belzer, J. 45, 186 Bennett, R. R. 175, 176, 250, 251, 253 Benoit, 112 Benson, B. S. 249 Berck, W. F. 248 Bereis, R. 48 Berggren, G. 48 Bergman, S. 45 Bergström, H. 134 Berkeley, E. C. 95, 128, 167, 172 Bickerstaff, T. E. 147 Bickley, W. G. 16 Bickmore, C. E. 12 Bieberbach, L. 128, 132, 133 Bigelow, J. H. 99 Birge, R. T. 143 Birnbaum, Z. W. 49, 150 Bisplinghoff, R. L. 249 Black, A. N. 72 Blackett, D. W. 244 Blanch, G. 15, 66, 76, 212 Blum, J. 168

Bodewig, E. 14 Boelter, L. M. K. 173 Boermeester, J. M. 186 Bogert, B. P. 177 Bonner, D. T. 175 Booth, A. D. 97 Boothroyd, A. R. 49 Bouwkamp, C. J. 76 Bower, E. C. 65, 67, 186, 188, 189 Brainerd, J. G. 99, 190 Bramble, C. C. 172, 186 Brandenburg, H. 191 Bretoi, R. N. 175, 250, 251 Brillouin, L. 99 Brinkley, S. R. Jr. 112, 186 Brock, P. 103, 175, 176, 250, 252 Brocot, A. 137 Brooke, A. W. 98 Broomall, J. 174 Brown, D. R. 173 Brown, G. W. 105, 106, 178 Brown, W. F., Jr. 81, 143 Browne, S. H. 47 Buckingham, E. 138 Burgess, J. 69 Burnside, J. L. 175, 250, 251 Bykhovskii, M. L. 40

Cahn, A. S. Jr 173 Callet, F. 189 Cannon, E. W. 29, 45, 86, 97, 163, 169, 232 Cantor, G. 140 Capuano, R. E. 82, 83 Caquot, M. 97 Carrus, P. A. 152 Carter, A. H. 153 Cauchy, A. 137 Chandrasekhar, S. 23 Chapman, D. G. 141 Chappell, E. 189 Charnes, A. 244 Chatland, H. 133 Chebyshev, P. L. 142, 143, 145 Chernac, L. 215, 216 Cherry, E. C. 49, 50 Cherry, L. H., 47, 173 Cherry, T. M. 219 Chetaev, N. G. 151 Cheydleur, B. F. 186 Cholesky, 13, 112 Church, R. 53 Citizen, J. Q. 245 Clark, J. W. 178 Clark, R. A. 154

Clark, W. R. 98 Clemence, G. M. 186 Clenshaw, C. W. 39 Clippinger, R. F. 44 Clogston, A. M. 98 Coates, R. P. 186 Coburn, N. 49 Cochran, W. G. 17 Coghlan, R. M. 231 Cohen, A. C., Jr. 75 Colebrook, E. M. 97 Coleman, J. S. 172 Collar, A. R. 14 Collatz, L. 14 Comrie, L. J. 108, 109, 191 Condon, E. U. 46, 47, 173, 244, 245 Connolly, J. J. 174 Connolly, T. J. 242 Conolly, B. W. 76 Cook, C. F. 175, 250, 251 Cooke, F. J. 99 Cooley, E. F. 172 Coombs. A. 77 Cooper, E. P. 47 Cooper, W. 244 Coplen, H. L. 47 Coradi, G. 106, 180 Cornfield, J. 142 Couffignal, L. 97 Coull, J. 51 Coulson, C. A. 162, 165, 167, 222 Cowell, P. H. 61, 66 Cox, G. M. 17 Craig, C. C. 17, 22, 72, 73, 86, 141, 145, 147 Cranz, C. 190 Crawford, R. 196 Crédit Communal de Belgique, 228 Crelle, A. L. 138 Crommelin, A. C. D. 61, 66 Crown, J. C. 172 Cruise, S. E. 239 Cullen, J. 231 Culler, V. E. 225 Cunningham, A. J. C. 135, 138, 139, 160, Cunningham, L. E. 47, 173 Curtis, H. L. 178 Curtiss, J. H. 44-46

D

D

D

D

D

D

D

D

D

D

D

d

D

D

D

D

D

D

D

D

D

D

D

D

D

D

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

F

Fa

Fe

Danforth, C. E. 254 Daniels, H. L. 44, 45 Dantzig G. B. 45, 244, 245 Dau, F. J. 244 Davenport, H. 133 David, F. N. 72, 73 Davis, C. F. 186, 188 Davis, H. T. 26, 82, 141, 146, 147, 149, 190 Davis, W. W. 99 Dawson, H. G. 67, 68, 70 Debreu, G. 244 DeBroglie, L. 97 Dedekind, R. 255, 258 De Lella, A. 190 De Lury, D. B. 142, 143, 160 Flood, M. M. 190, 244 De Morgan, A. 138 Dempsey, C. W. 143 den Broeder, G. G. 175, 250, 251 De Wolff, N. 99 Dickson, L. E. 85 Dickson, L. E. 85

Dimsdale, B. 172

Dinnik, A. N. 151

Diprose, K. V. 240

Dirac, P. A. M. 160, 226

Ditkin, V. A. 25, 27

Doodson, A. T. 80

Doporto, M. 249

Each of the control of the Dryden, H. L. 45

Dryden, H. L. 45

Duncan, W. J. 14

Friedman, D. 99

Friez, W. B. 171

Eckert, J. P. 245 Eckert, W. J. 185, 186 Egan, U. N. 19, 149 Ehlers, H. L. 175, 250, 252 Eichelbrenner, E. A. 227 Eisenhart, C. 143 Ekelöf, S. 48, 97 Elbourn, R. D. 41, 44, 240, 242, 243 Elliott, W. S. 240 Elmendorf, A. 100-102 Eisey, P. J. 107 Emersleben, O. 77, 78 Elsev. P. J. 107 Engel, E. 20 Erdélyi, A. 23, 25, 26, 77, 78, 80, 154-156, 158-160, 222, 223, 225-227 Erion, W. E. 98 Euler, L. 136, 250 Evans. D. S. 240 Evans, G. W. II 175, 250 Everett, R. R. 171

147

160,

Faddeeva, V. N. 24, 224 Farey, J. 135-138 Fein. L. 172 Fender, F. G. 103

Eyres, N. R. 179

Ferber, B. 186 Fermat, P. 84, 85, 134 Fermi, E. 160 Ferrier, A. 55, 82 Fifer, S. 175, 250 Finelli, J. J. 96 Fisher, R. A. 17-19, 70, 141-143, 154 Flake, G. 162 Fletcher, A. 157, 187, 189, 223 Forrester, J. W. 174 Forsythe, G. E. 55, 115, 184, 244, 258 Fowle, F. E. 190 Fox, L. 35, 36, 39, 65, 67, 95, 165, 166, 167, 258 Duncanson, W. E. 162, 165, 167 Fröberg, C. E. 34, 48, 154
Duncombe, R. L. 231 Frost, H. B. 98, 99
Dwyer, P. S. 15 Früchtl, K. 215 Fulton, A. S. 175, 250, 251

> Garabedian, P. R. 47 Garwin, R. L. 104 Gastaut, H. 97 Gauss, C. F. 13, 14, 255, 256, 258 Gavurin, M. K. 24, 224 Gayen, A. K. 144 Geiringer, H. 14, 240 Gerling, C. L. 255, 256, 258 Germain, P. 97 Ghizetti, A. 26 Gibb, D. 213, 215 Gilbert, D. L. 85, 86 Gill, S. 169 Gilpin, R. D. 175, 250, 251 Gjeddebaek, N. F. 144 Glaisher, J. W. L. 53, 54, 138-139 Glinski, G. 174 Gloden, A. 12, 28, 85, 133, 162 Glover, J. W. 221 Gnedenko, B. V. 221 Glover, J. W. 228 Godefroy, E. 84 Godet, S. 51 Godwin, H. J. 147 Goetz, J. A. 98 Goldberg, E. A. 50, 105, 106, 178

Goldberg, K. 81, 171 Goldstein, L. 244 Goldstine, H. H. 240, 245 Goode, H. H. 175, 250, 251 Goodwin, E. T. 35, 36, 39, 65, 67, 69, 165, 167 Goodwyn, H. 136-139 Gordon, A. R. 67, 69 Gossett, W. S. 75, 86 Gotlieb, C. G. 161, 186 Gram, J. P. 142 Grammel, R. 155 Grant, E. L. 150 Gray, A. 151, 152 Gray, H. J. 190 Gray, T. S. 178 Green, C. P. 162 Green, E. 47 Greenfield, A. 245 Greenwood, R. E. 82 Gregory, O. 139 Gridley, D. H. 98, 174, 242 Grieves, H. C. 96 Grosser, C. E. 51 Grubbs, F. E. 73, 150 Gruenberger, F. 110 Gruschwitz, E. 227 Guillemin, E. A. 182 Gupta, H. 71

Hagen, G. E. 172 Hald, A. 74, 145 Hall, A. C. 172 Hamming, R. W. 40, 186 Handy, B. F., Jr. 170 Hanna, R. B. 170 Hansen, M. V. 44 Haros, C. 136, 137 Harrington, J. V. 174 Hartley, H. O. 75, 145, 146, 160 Hartree, D. R. 169, 179, 183 Harvard Univ. Comp. Lab. 223 Hasse, H. 134 Hastings, C., Jr. 186 Haupt, L. M. 102 Hayashi, K. 189, 224 Haynes, A. L. 171 Heilfron, C. 19 Heiss, J. F. 51 Heller, I. 244 Heney, J. 98 Hensel, R. 186 Herrick, S. 47, 66, 190

Hershey, A. V. 172

Hessel, I. F. C. 140 Hessenberg, K. 14 Hestenes, M. R. 250 Higgins, T. J. 83 Higgs, R. E. 99 Hill, J. L. 95 Hodgman, C. D. 189 Hollander, F. H. 186 Holley, J. L. 244 Hollingdale, S. H. 97 Holt, A. W. 99 Holt-Smith, C. 240 Holtappel, H. W. 190 Hoppenot, S. 134 Hopper, G. M. 172 Horton, C. W. 24 Horton, H. B. 8 Hotelling, H. 120, 248 Houseman, E. E. 81, 143, 190 Howell, J. M. 147 Hrones, J. A. 51 Huntoon, R. D. 44 Hurd, C. C. 95, 171, 186 Hurwicz, L. 244 Hurwitz, A. 53 Huskey, H. D. 46, 47, 99, 173 Hyman, M. A. 45

Kat

Kāv

Kell

Kell

Ken

Ken

Ken

Ker

Kin

Kin

Kirl

Kit

Kje

Kna

Kn

Koo

Kol

Kö

Ko

Ko

Ko

Ko

Kra

Kra

Kre

Kri

Kn

Kri

Kr

Kr

Ku

La

Le

Le

Le

Iams, H. 178 Ingham, J. 179 Inkeri, K. 133 Inman, J. 259

Jackson, J. 65, 66
Jackson, R. 179
Jacobi, K. G. J. 139
Jarden, D. 72
Jedeur-Palmgren, G. 48
Jindra, F. 155
Joffe, S. A. 113
John, F. 258
Johnson, C. T. 27
Johnson, E. A. 240
Jones, G. 163
Jordan, W. B. 183
Jørgensen, N. R. 228
Jourdain, P. E. B. 140

Kantorovich, L. V. 24 Kaplan, E. L. 78 Kaplansky, I. 15 Karlqvist, O. 34 Kármán, T. v. 227 Kates, J. 99 Katz, L. 19, 146, 148 Kāyan, C. F. 51 Kelley, T. S. 190 Kelly, J. P. 186 Kendall, M. G. 19, 109, 110 Kennedy, E. C. 186 Kenyon, R. R. 27 Kerawala, S. M. 13 Kincaid, M. 170 King, G. W., Jr. 172 Kirkpatrick, P. H. 47 Kirkpatrick, P. H. 47 Kitts, W. A., 3rd 186 Kjellberg, G. 34, 97 Knapton, J. H. 41 Knudsen, L. F. 143 Koch, J. J. 14 Kohler, T. R. 99 König, H. 133 Koopmans, T. C. 244 Kopal, Z. 82 Korn, G. A. 178 Kossack, C. F. 19, 144 Kraft, H. 186 Kraitchik, M. 72, 82, 134 Kreyszig, E. 156, 184 Krishnaswami, A. A. 28 Kropoff, N. 232 Krüger, L. 258 Krupp, H. 224 Kruse, U. E. 225 Kutta, M. W. 169

Laderman, J. 112, 190 Lagerman, S. 48 Landen, J. 78 Landry, F. 134 Langmuir, D. B. 52 Lapicque, L. 97 Lapin, E. 47 Laplace, P. S. 15 Laporte, O. 225 Laughton, J. K. 259 Laurent, T. 48 Lawden, D. 240 Lawrence, W. 240 Lazecki, S. 174 Lebell, D. 173 Lee, A. 75 Legendre, A. M. 27 Lehmer, D. H. 5, 8, 12, 15, 28, 44, 47, 54, 70-72, 82, 84, 109, 134, 138, 139, 153, 154, 160, 173, 186, 190, 216, 226, 232 Leibler, R. A. 55 Leiner, A. L. 44, 236

Leitner, A. 79 Leontief, W. W. 244 Lessing, L. P. 242 Levens, A. S. 102 Levin, J. H. 41, 172 Levine, H. 23 Levy, I. 98 Levy, L. I. 249 Lewy, H. 85 Liebmann, G. 179 Lienard, R. A. 28, 82, 231 Lillie, J. H. 162 Lind, B. 34 Lindberger, A. 34 Link, R. F. 147 Link, R. F. 147 Linvill, W. K. 172 Liouville, J. 71 Lipka, J. 102 Littauer, S. B. 74 Little, E. P. 47 Liusternik, L. A. 25, 27 Lodge, A. 151, 152 Lommel, E. C. J. 154 Long, M. E. 26 Lord, E. 147, 148 Lorente, R. 98 Lotkin, M. 133, 172, 186 Lowan, A. N. 25, 158, 159, 190 Lowell, S. C. 96 Luke, Y. L. 153, 162, 163, 232 Lundt, E. 186 Lynch, J. K. 70

McAllister, H. 84, 186 McAvory, A. 254 McCallum, D. M. 242 McCann, G. D. 52, 253 McCool, W. A. 103, 175, 250, 252 McCormack, R. L. 99 McCulloch, W. 98 McDougall, J. 160 McEwan, W. S. 179 McFee, R. 103 McGeoghegan, M. E. 45 McKay, A. T. 73, 74 McLachlan, D., Jr. 107 Macmillan, D. B. 90, 254 McNally, J. O. 98 MacNeal, R. H. 253 MacNee, A. B. 108, 174 McPherson, J. L. 172, 245 MacRobert, T. M. 151, 152 Madow, W. G. 96 Magnus, W. 83

Makar, R. 49 Malmberg, G. 48 Mann, H. B. 150 Mantel, N. 142 Many, A. 180 Marden, E. C. 172 Mark. A. M. 110 Markusen, D. L. 175, 250, 251 Marshall, B. O., Jr. 104 Marshall, R. W. 180 Massev, F. I. 75 Mathews, G. B. 151, 152 Mauchly, J. W. 8 Maxfield, J. E. 248 May, J., Jr. 136 Mayberry, J. P. 244 Meiboom, S. 180 Meissel, E. D. F. 223 Meissinger, H. 176, 250, 252 Meissner, W. 26, 84 Melahn, W. S. 175, 250, 251 Mendelson, M. J. 172 Mengel, A. S. 172, 175, 250 Merrill, L. C. 175, 250 Mersman, W. A. 173, 175, 250 Merwin, R. 190 Metropolis, N. 226 Meyer zur Capellen, W. 102 Meyers, L. F. 218 Mickelsen, J. K. 52 Miksa, F. L. 232 Miles, A. J. 182 Miles, J. G. 174 Miller, A. H. 176, 250. 252 Miller, J. C. P. 26, 45, 77, 166, 187, 189, 221 Miller, J. J. 82 Miller, K. S. 106, 180, 253 Miller, W. L. 67, 69 Milne, W. E. 66, 67 Milne-Thomson, L. M. 157 Mises, R. v. 14, 240 Mitchell, H. F. 172 Molina, E. C. 146 Montalbano, M. 95, 169, 242 Moore Sch. of El. Eng. 41, 43 Moore, A. D. 253 Moore, B. L. 170 Moore, E. F. 172 Morrill, C. D. 174 Morrison, R. 255 Morse, P. M. 159 Morton, P. L. 61, 86, 173, 189 Moses, L. 47

Motzkin, T. S. 244, 258

Münch, G. 23 Munford, C. M. 160 Munk, M. 158 Murray, F. J. 49–52, 102–104, 106–108, 177, 178, 180, 249, 251, 253–255 Murray, J. E. 99, 100, 102 Myard, F. E. 100, 102

Pf

Ph

Pia

Pic

Pic

Pit

Piz

Po

Po

Po

Po

Po

Po

Po

Pra

Pri

Pu

Ra

Re

Re

Re

Re

Re

Re

Re

Re

Re

Re Re

Re

Re

Re

Rh

Rh

Ri

Ri

Ri

Ri

Ri

Ri

Nair. K. R. 73, 74 NBSCL 22, 70, 151, 158, 159 Nelson, W. F. C. 146, 147 Neovius, G. 34 Nergaard, L. S. 98 Neuber, R. E. 178 Neumann, J. v. 1, 8, 44, 240 Neville, E. H. 135, 137-139 Newman, M. H. A. 45 Newton, I. 183 New Zealand Dept. Lands & Survey 26 Neyman, J. 47, 147, 148, 173 Nichols, N. B. 176 Nims, P. T. 171 Niven, I. 139 Norton, H. W. 72, 142 Numerov, B. V. 65, 66

Oberhettinger, F. 79, 83 O'Brien, M. P. 173 O'Brien, N. 21 Oldfield, B. G. 254 Olver, F. W. J. 39 Opler, A. 120, 186 Oppolzer, T. R. v. 66 Orden, A. 244, 245

Packer, L. R. 228 Page, H. T. 107 Page, R. M. 138 Pal, B. 153 Palm, C. 29, 34, 48 Papian, W. N. 174 Paschkis, V. 179, 183 Patnaik, P. B. 148 Patterson, G. W. 43, 128, 172 Pearson, E. S. 73-75, 146, 160 Pearson, K. 75, 86, 146 Peel, R. V. 245 Pendery, D. W. 254 Perry, C. L. 45 Persson, B. 139 Peters, J. 21, 137, 162, 190, 191, 230 Peters, S. 217 Peterson, L. C. 177 Petersson, P. 34

Petherick, E. J. 97 Pflanz, E. 16 Phillips, M. L. 21 Pian, T. H. H. 249 Picone, M. 97 Piore, E. R. 174 Pipes, L. A. 173 Piza, P. 15 Pohlhausen, K. 227 Polachek, H. 45, 186 Pollak, L. W. 19-21, 149 Polya, G. 71 Pomerene, J. H. 99 Poritsky, H. 254 Powers, R. E. 28 Prandtl, L. 11, 226, 227 Price, A. T. 159 Puig-Adam, P. 98

77,

Rabinow, J. 45 Radon, B. 79 Rafferty, J. A. 8 Rainsford, H. F. 112 Rajchman, J. 98 Ramanujan, S. 138 Ramsey, N. F. 225 Rand, J. H. 245 Raphson, J. 183 Rapport, V. A. 171 Rawling, G. A. 158 Raymond, F. H. 104 Raynolds, D. W. 162 Redheffer, R. 106 Rees, M. 44, 98 Rehler, K. M. 172, 174 Reich, E. 240 Reid, R. R. 107 Reitan, D. K. 83 Reitwiesner, G. W. 84, 186 Reitz, J. R. 226 Reiz, A. 83 Renwick, W. 44 Reswick, J. B. 51 Reuschle, K. G. 139 Reynolds, G. E. 180 Reynolds, R. R. 227 Rhodes, I. R. 40, 171 Rhodes, P. 160 Rich, E. S. 98 Richards, J. R. 172 Richardson, L. F. 179 Richmond, W. F., Jr. 176, 250, 253 Ridenour, L. N. 46 Riebman, L. 174

Riemann, G. F. B. 71
Riordan, J. 13, 15
Robbins, R. C. 240
Robertson, W. H. 230
Robinson, G. 258
Robinson, R. M. 85, 162, 191
Rogers, T. A. 173
Roscoe, R. 182
Rosenhead, L. 187, 189
Rosser, J. B. 67, 69, 84
Runge, C. 133
Ruzek, C. V. 186

Sage, B. H. 242 Salvosa, L. R. 146, 147 Salzer, H. E. 11, 16, 27, 69, 70, 80, 82-84, 140, 141, 162, 167, 213, 215, 218, 219 Salzer, J. M. 172 Samuel, A. L. 98 Samuelson, P. A. 244
Sang, E. 137 Sarahan, B. L. 242 Sard, A. 218 Sargant, R. J. 179 Saunderss, W. K. 226 Savage, D. 45 Sawyer, C. 245 Schade, H. A. 173 Scheffer, H. 140 Schell, E. D. 45, 244 Schiffer, M. M. 45 Schilling, R. 172 Schilt, J. 186 Schomaker, V. 186 Schott, F. W. 173 Schreiner, B. 96 Schrock, E. M. 149 Schwarz, L. 189 Schwinger, J. 23 Scott, A. H. 106 Seeger, R. J. 45 Seidel, L. 238-240, 255, 258 Seiler, F. S. 46 Seiwell, H. R. 106 Sekar, C. C. 73, 74 Sells, B. E. 254 Sells, B. E. 254 Semon, W. L. 228, 230 Shapin, T. Jr. 172 Shaw, R. F. 171 Shaw, R. R. 45 Sherman, J. 81, 143, 186, 255 Sherman, S. 250, 252 Shibagabi W 20 Shibagaki, W. 80 Shimizu, H. 107

Siegel, R. 15 Silver, S. 226 Simpson, T. W. 182 Skolnik, S. 179 Slinkman, R. W. 99 Slutz, R. J. 44 Smith, C. V. L. 45 Smith, J. B. 242 Smith, R. C. T. 231 Smith, R. W., Jr. 112 Snowden, F. C. 107 Soroka, W. W. 173, 255 Southwell, R. V. 14, 258 Speiser, A. P. 243 Spence, H. W. 98, 243 Spence, R. D. 26, 79 Spencer, G. R. 174 Spencer, R. C. 180 Speziali, P. 139, 160 Sprague, R. E. 172 Staderman, P. 175, 249 Stanley, J. P. 25, 160 Stark, R. H. 90, 172, 254 Steen, J. R. 98 Stein, I. 162 Stein, P. 239, 240 Stevens, L. D. 41 Stone, J. J. 172 Stoner, E. C. 160 Stromback, Du R. E. 107 Stumman, H. E. 99 Sukhatme, P. V. 142 Sylvester, J. J. 137 Szegő, G. 167

Tai, C. T. 186, 222 Taussky-Todd, O. 14, 134, 239, 258 Teague, D. S., Jr. 175, 250, 251 Thijsen, W. P. 140 Thomas, L. H. 45 Thomas, P. D. 27 Tibbetts, G. C. 55 Tikhotskii, K. I. 52 Tippett, L. H. C. 74 Titchmarsh, E. C. 69 Todd, J. 39, 45, 167, 189, 244 Tokarska, B. 147, 148 Tompkins, C. B. 245 Tootill, G. C. 240 Torrès-Quevedo, G. 98 Torrey, H. C. 225 Travis, I. 45 Treuenfels, C. G. 152

Truesdell, C. 160 Tucker, A. W. 244 Turing, A. M. 70

Ufford, D. 163, 232 Uhler, H. S. 84 U. S. Hydrographic Office. 230 Uttley, A. M. 97, 102 Wil

Wil

Wil

Wol

Wor

Wor

Wor

Woo

Woo

Wre

Wri

Wul

van den Dungen, F. H. 97
van der Pol, B. 139, 160
van der Reyden, D. 143
Vandrey, F. 11, 226
Van Dyk, T. 98
Van Orstrand, C. E. 27, 191
van Wijngaarden, A. 12, 22, 97, 160
Velander, E. 48
Verzuh, F. M. 186
Vickers, T. 166
Vinogradov, I. M. 151
Vogel, E. 175, 250, 252
Voitilla, G. B. 40
Votaw, D. F., Jr. 8, 244

Wagstaff, J. B. 179 Wald, A. 150 Wallace, M. W. 98 Wallman, H. 108 Wallmark, M. 34 Walsh, J. E. 8, 142, 145 Walter, W. G. 97 Walther, A. 156 Wang, A. 43 Warren, K. 186 Watson, G. N. 22, 23, 25, 69, 151, 189 Watson, J. C. 66 Waugh, F. V. 248 Weber, M. A. 155, 225 Weinberg, J. W. 143 Wells, C. P. 26 Westenberg, J. 21, 22 Western, O. 12 Wheatley, W. A. 175, 250, 251 Whittaker, E. T. 69, 258 Widell, G. A. 48 Wielandt, H. 14 Wijdenes, P. 191 Wilkes, M. V. 25, 44, 45, 97, 160, 171 Wilkins, J. E., Jr. 232 Williams, C. A., Jr. 150 Williams, F. C. 46, 102 Williams, O. A., Jr. 153 Williamson, B. 110

NAME INDEX

Wilson, L. H. 182 Wilson, L. M. 83 Wilts, C. H. 52 Wolf, E. 226 Wong, Y. K. 244 Woo, W. D. 43 Wood, M. K. 244 Woodall, H. J. 160, 231 Woodbury, M. A. 244, 255 Wrench, J. W. 25 Wright, H. 99 Wulfsberg, K. N. 174 Yamamoto, K. 13 Yates, F. 17-19, 70, 141-143 Youtz, P. 98 Yowell, E. C. 43, 173, 212

Zadeh, L. A. 178
Zahn, C. T. 225
Zeilon, N. 48
Zucker, R. 82, 83, 167
Zuckerman, H. S. 49
Zurmühl, R. 13, 255, 258
Zuse, K. 45